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A New Species of the Genus *Orussonia* Riek and the Female of *O. depressa* Riek (Hymenoptera: Symphyta, Orussidae)

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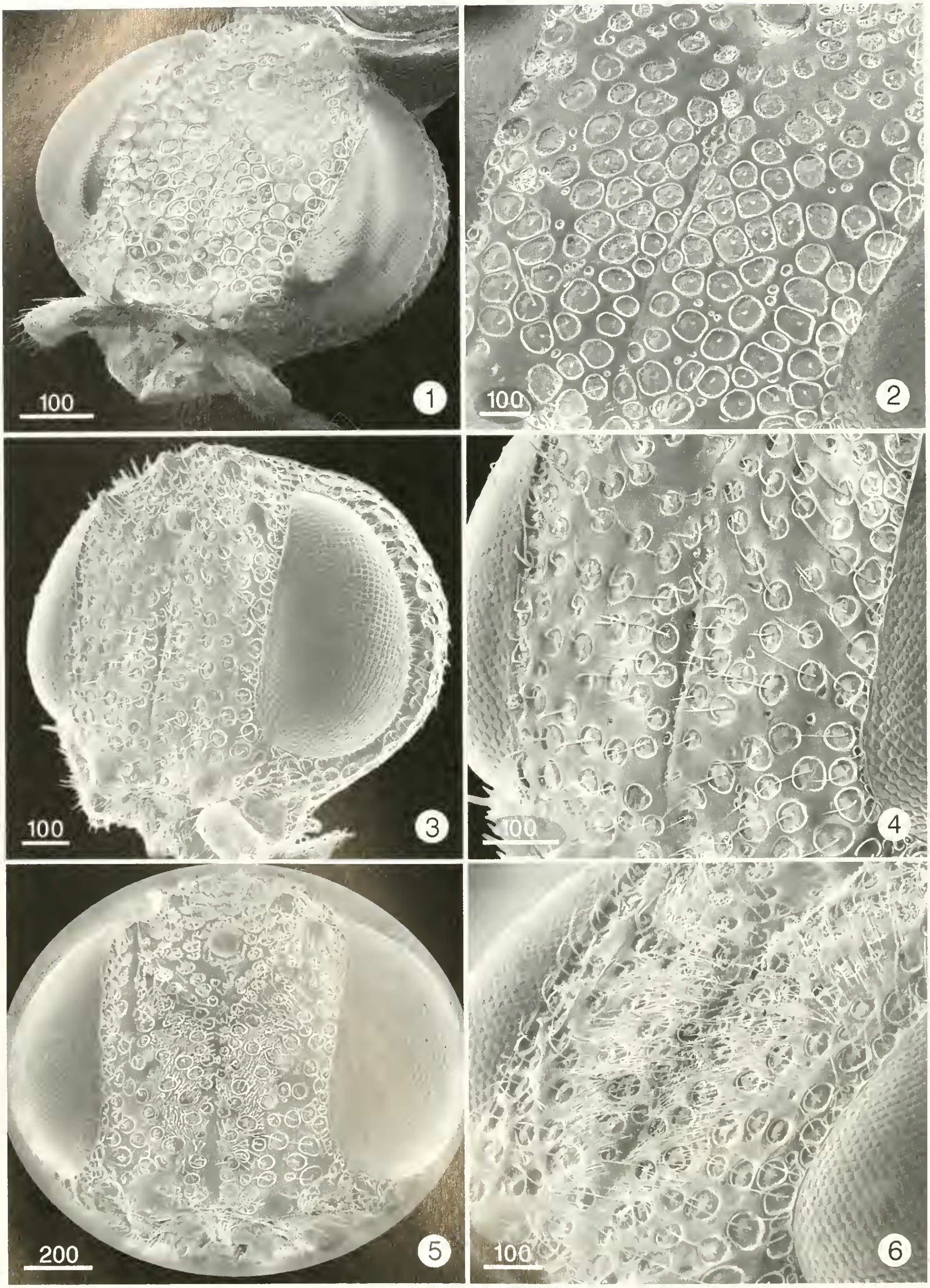
Abstract.—***Orussonia ruficaudata*** **Schmidt and Gibson, new species,** and the female of *O. depressa* Riek are newly described; the male of *O. depressa* is redescribed and differential features of the species and of the sexes of *O. depressa* are illustrated.

Riek (1955) established the genus *Orussonia* for two males collected in 1952, which he described as *O. depressa.* One of us (GAPG) recently collected two females that we associate as the opposite sex of *O. depressa.* We also discovered in the Australian National Insect Collection a third female, collected many years earlier in 1919, which Riek had identified as a second undescribed species and labelled with the manuscript name *O. ruficaudata.* Here we describe what we consider to be the female of *O. depressa* and the female of this second species, which we name *O. ruficaudata.*

Orussonia is one of three genera of Orussidae occurring in Australia (Riek 1955). The other two genera are *Guiglia* Benson with at least four Australian species (Benson 1955, Riek 1955, Vilhelmsen, pers. comm.) and *Orussobaius* with six species from Australia and one from New Guinea (Schmidt and Vilhelmsen, in prep.). The genus *Orussonia* constitutes, together with genera traditionally placed in the tribe Leptorussini by Benson (1955), a paraphyletic group comprising the basalmost lineages of the Orussidae (Vilhelmsen, pers. comm.). Females of species of the genus *Orussonia* possess two pairs of medially separate coronal teeth (Figs 1, 3) and an incomplete ventral transverse frontal carina, whereas in most other orussid genera there are at least three pairs of medially separate coronal teeth and a fully developed ventral transverse frontal carina (Vilhelmsen, pers. comm.). Among all orussids *Orussonia* is the only genus with an extremely dorsoventrally flattened body and a prognathous head and is, therefore, easily recognisable. Nothing is known about the biology of *Orussonia,* but the flattened body shape might indicate that they crawl under loose bark. It is known for some beetles with dorsoventrally flattened bodies that they occur under bark, e.g. species of the genus *Platisus* (Coleoptera, Cucujidae) (Lawrence and Britton 1991).

METHODS

The holotype female and male of *O. ruficaudata* and *O. depressa,* respectively, were used for the scanning electron micrographs. All specimens were uncoated and digital images were obtained with a Philips XL 30 ESEM. The low vacuum environmental scanning mode was used for all except Fig. 1, which was obtained under high vacuum. A 1 mm cone aperture was used during low vacuum mode to improve image quality, which resulted in a circular image format at low magnifications. The digital images were enhanced



Figs. 1–6. *Orussonia* species. 1–2, *O. ruficaudata*, sp. n.: 1, head, frontolateral view; 2, face. 3–6, *O. depressa* Riek: 3, head of female, frontolateral view; 4, face of female; 5, head of male, frontal view; 6, face of male, frontolateral view. Scale bars = μm.

and the final plates compiled using Adobe Photoshop™. Figure 10 is a composite of two images and figure 11 is a composite of four images.

Orussonia Riek

Orussonia Riek 1955: 104.
Type species: *Orussonia depressa* Riek, by original designation.

Description.—Body strongly dorsoventrally depressed, thorax height about half its maximal width measured from above. Head prognathus, occiput strongly excavated and appressed over convex anterior margin of pronotum. Vertex of female with two, of male with three separate pairs of coronal teeth and a less conspicuous, smaller, subcontiguous medial pair dorsally of the lateral ocelli. Female antenna 10-segmented; eighth and ninth segments separated by a fine suture and forming a club; tenth segment peg-like, apically truncate and arising near middle of inner margin of ninth segment. Male antenna filiform, 11-segmented. Antenna about 1.5 × as long as head width, third segment shorter (0.56–0.71) than combined length of fourth and fifth segments, sixth segment slightly longer than third. Face between compound eyes flat with shallow punctures, without longitudinal carinae (Figs. 1–6). Gena rugose. Epistomal sulcus absent, ventral transverse frontal carina reflexed and with shallow median incision. Maxillary palp 5-segmented, labial palp 3-segmented. Mesoscutum and scutellum flat, forming a plane; scutellum crenulate along scutoscutellar line but otherwise smooth and shiny except for a few small setiferous punctures (Figs. 7, 8). Axillae punctate-rugose, contiguous medially, separated by a distinct median carina (Figs. 7, 8). Mesopleuron laterally reticulate-rugulose to punctate and setose except for smooth and shiny bare region medially below base of hind wing; ventrally much smoother with scattered setiferous punctures except more coarsely sculptured anterolaterally (Fig. 11). Metafemur swollen, about 2.5 × as long as its maximal width. Forewing hyaline behind stigma but partly infuscate basally and apically, with two cubital cells, without intercostal crossvein; anal cell closed, petiolate. Radial cell of forewing and hind wing open apically. Hind wing with large jugal lobe and without closed medial cell. Abdominal tergites 2–5 and 6 basally, laterally carinate; second tergite subequal in length or slightly shorter than combined length of third and fourth tergites.

Remarks.—*Orussonia* is readily distinguished from all other orussid genera by its strongly depressed body and prognathus head (Riek 1955, figs. 2, 3).

KEY TO SPECIES OF *ORUSSONIA* RIEK

1 Male and female: face with punctures separated by distinct interspaces, some of which are greater than the diameter of a puncture (Figs. 3–6); abdomen black, apical segment occasionally orange-brown . . . . *depressa* Riek
– Female: face with punctures nearly contiguous, separated by narrow interspaces (Figs. 1, 2); abdomen black with apical two segments orange-brown . . . . *ruficaudata,* new species

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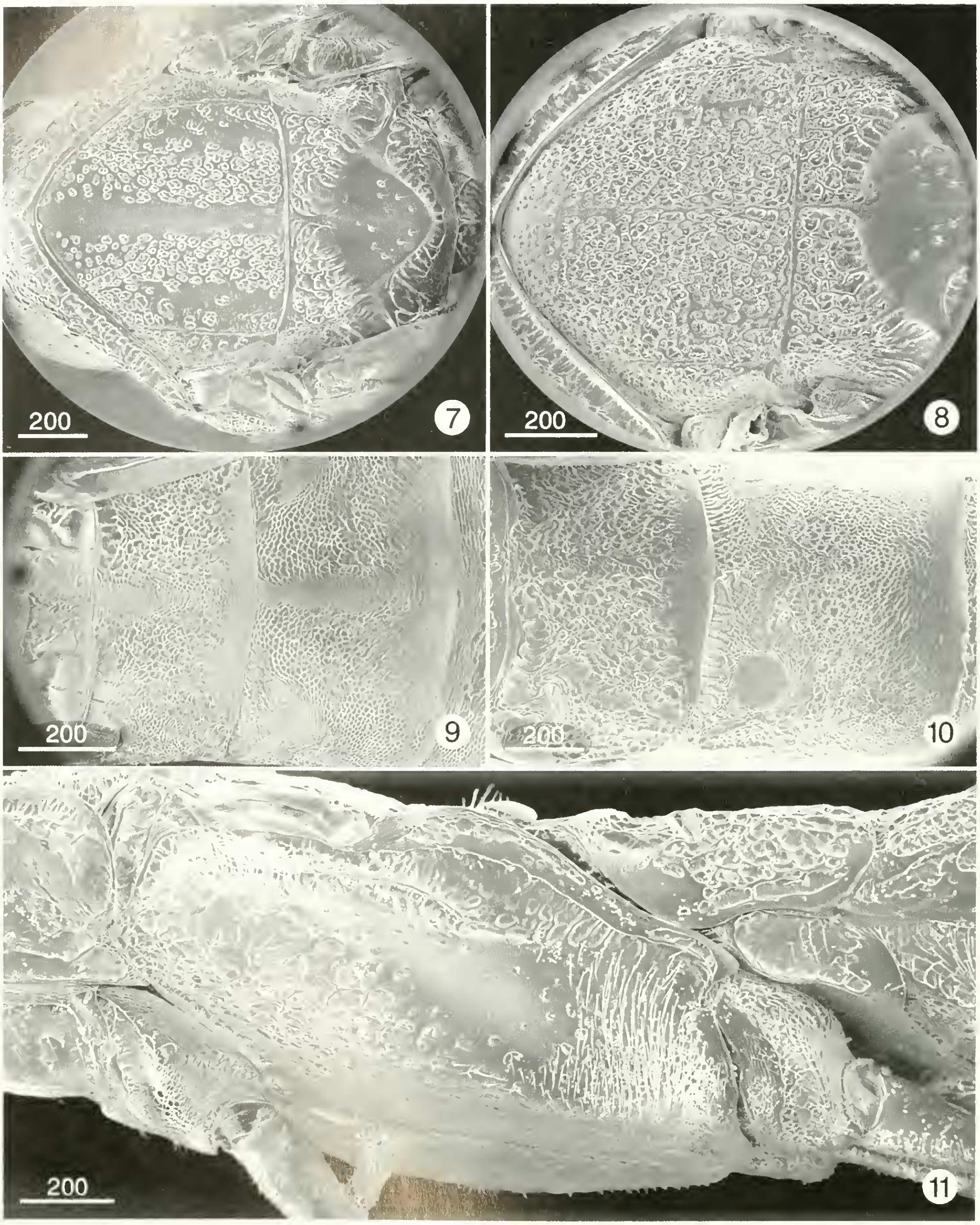
Orussonia depressa Riek
(Figs. 3–11)

Orussonia depressa Riek 1955: 104–5. Holotype ♂, Australia, NSW, 4 miles N. Bateman's Bay, 14.x.1952, E.F. Riek. Type in the Australian National Insect Collection, Canberra. Paratype ♂, same data as holotype, in The Natural History Museum, London (both examined).

Additional material examined. 2 ♀♀, Austra-



Figs. 7–11. *Orussonia depressa* Riek. 7, female thorax, dorsal view; 8, male thorax, dorsal view; 9, abdominal tergites 1 and 2 of female, dorsal view; 10, abdominal tergites 1 and 2 of male, dorsal view; 11, thorax and base of abdomen of male, ventrolateral view. Scale bars = μm.

lia, ACT, Canberra, Black Mountain, 2.xi.1998 and 23.x.1998, G.A.P. Gibson. The specimens were collected on dead eucalypt trees. One specimen deposited in ANIC and one in the Canadian National Insect Collection, Ottawa. 1 ♀, Victoria, Red Hill, Oct. 1965, D.R. Holmes, in Oberösterreichisches Landesmuseum, Linz, Austria.

Female.—Body length 5–6 mm. Black with following yellowish to orange-brown: labrum and labiomaxillary complex, tenth flagellar segment and sometimes basal three to seven flagellar segments, protibia apically on outer surface, tarsi except apical segment sometimes brown, metatibia dorsomedially, abdominal sternites medially and apical tergite occasionally. Forewing smoky-hyaline with band near base and larger region beyond stigma brownish; stigma black. Face (Figs. 3, 4) flat with shallow, oval to subcircular punctures separated by smooth, shiny, glabrous interspaces, the largest interspaces greater than diameter of a puncture; punctures each with single seta. Mesoscutum (Fig. 7) punctate-rugose except with shiny, smooth or mostly smooth medial band, and with a less distinct smooth region laterally near parapsidal line. Abdomen with basal two tergites reticulate-rugose except medially and apically smooth to finely coriaceous (Fig. 9); remaining tergites primarily coriaceous but with increasingly obscure, paramedial, transverse punctate-rugose line anteriorly on tergites 3–5.

Male.—Similar to female except for following: face (Figs. 5, 6) densely setose medially over region about as wide as clypeus (Fig. 5), flat interspaces with numerous setae originating from distinct setal pores (Figs. 5, 6); mesoscutum (Fig. 8) punctate-rugose except punctate with smooth interspaces anteriorly and with obscure median carina. Second abdominal tergite without medial coriaceous band and with larger and more distinct shiny spot basolaterally (Fig. 10).

Remarks.—We consider it likely that the described differences between the sexes are secondary sexual features. This would be consistent with sexual differences found in other orussids. However, we are currently unable to exclude the possibility that the females and males represent separate species. Discovery of the male of *O. ruficaudata* would provide more information on sexual differences among species of *Orussonia.*

Orussonia ruficaudata Schmidt and Gibson, new species

(Figs. 1, 2)

Holotype female: [Australia] "Lakes Entrance, October 1919, V. [Victoria], F.E. Wilson"; "Ex. Coll. Nat. Mus"; "Holotype *Orussonia ruficaudata* Riek"; "manuscript name"; "Holotype *Orussonia ruficaudata* Schmidt & Gibson". Condition of holotype: right antenna missing beyond scape; mounting pin through mesoscutum medially. Type deposited in the Australian National Insect Collection, Canberra.

Female.—Body length 8.5 mm. Dark brown to black with following yellowish to orange-brown: labrum and labiomaxillary complex, antenna except segment nine and apical margin of segment eight, tibiae and tarsi except meso- and metatibia darker basally, apical two abdominal segments entirely and sternites 3–5 largely. Forewing hyaline with brownish region behind costal vein and large brownish region beyond stigma; stigma black. Face (Figs. 1, 2) flat with shallow, dense, almost alveolate punctures separated by interspaces which are narrower than diameter of a puncture; punctures each with single seta. Vertex with distinct, dark red coronal teeth. Mesoscutum punctate, punctures of different sizes and partly confluent, and with smooth band medially and paralaterally near parapsidal line. Abdomen with basal two tergites rugulose except medially and apically coriaceous to imbricate; remaining tergites primarily reticulate-coriaceous but with obscure, paramedial, transverse punctate-rugose line anteriorly on tergites 3–5.

Male.—Unknown.

Remarks.—In addition to the two features used to differentiate females of *O. ruficaudata* and *O. depressa* in the key, the single female of *O. ruficaudata* also has more distinctly differentiated punctures on the mesoscutum. The two *O. depressa* females have a more rugose mesoscutum.

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